

WHAT IS CLAIMED IS:

- 1 1. An apparatus for applying a thermal conductive
2 medium to an inside portion of a sheath, the apparatus
3 comprising:
4 a tubular applicator tip including a nozzle
5 positioned in a sidewall of the tubular applicator tip;
6 a pump having an input adapted for coupling to
7 a source of thermal conductive medium and an output
8 coupled to said tubular applicator tip; and
9 a control module for controlling the pump and
10 thereby the amount of thermal conductive medium applied to
11 said sheath by the tubular applicator tip.
- 1 2. The apparatus of claim 1, wherein the tubular
2 applicator tip has a closed tip end preventing expulsion
3 of thermal conductive medium from the tip in the axial
4 direction of said tip.
- 1 3. The apparatus of claim 2, further comprising:
2 a contact switch coupled to the control
3 circuit, the contact switch being positioned to come into
4 contact with the sheath when the sheath is properly
5 positioned over the tubular applicator tip.
- 1 4. The apparatus of claim 3, further comprising:
2 an applicator shaft for coupling the tubular
3 applicator tip to the pump output.

1 5. The apparatus of claim 4,
2 wherein the nozzle has a diameter in the range
3 extending from and including 0.14" to and including
4 0.145"; and
5 wherein the applicator shaft includes a bleeder
6 hole having a diameter one third or less the diameter of
7 said nozzle.

1 6. The apparatus of claim 3, further comprising:
2 a motor, for rotating said shaft, coupled to
3 said applicator shaft and to said control module.

1 7. The apparatus of claim 6, wherein the control module
2 includes:
3 a timing circuit for activating said pump in
4 response to activation of said contact switch and for
5 activating said motor following activation of said pump.

1 8. The apparatus of claim 7, wherein the timing circuit
2 includes:
3 means for deactivating said pump after a set
4 period of time; and
5 deactivating said motor after deactivation of
6 said pump.

1 9. The apparatus of claim 2, wherein said tubular
2 applicator tip includes:
3 an open shaft end attached to said applicator
4 shaft; and

5 a plurality of nozzles located along a line
6 extending in the axial direction between said closed tip
7 end and said open end.

1 10. The apparatus of claim 9 wherein the tubular
2 applicator tip further comprises:
3 a mushroom shaped cap portion at the closed tip
4 end; and
5 wherein each of said plurality of nozzles is a
6 hole in the sidewall of said tubular applicator tip.

1 11. A system for applying a thermal conductive medium to
2 a portion of the interior of a sheath, the system
3 comprising:
4 a thermal conductive medium storage device;
5 a pump coupled to the thermal conductive medium
6 storage device;
7 a thermal conductive medium applicator tip
8 coupled to said pump and including at least one hole
9 through which thermal conductive medium can be expelled
10 when pumped through the applicator tip by said pump; and
11 a switch coupled to said pump, for controlling
12 activation of said pump.

1 12. The system of claim 11, further comprising:
2 a hollow applicator shaft for mounting said
3 thermal conductive medium applicator tip, the hollow
4 applicator shaft coupling said thermal conductive medium
5 applicator tip to the pump; and

6 a motor connected to said hollow applicator
7 shaft for causing said applicator shaft to rotate.

1 13. The system of claim 12, wherein said thermal
2 conductive medium applicator tip is tubular in shape
3 having a closed tip end, an open shaft end and a sidewall
4 extending from the closed tip end to the open shaft end,
5 said hole being located in the sidewall.

1 14. The system of claim 13, further comprising:
2 a control circuit for coupling said switch to
3 said pump and said motor, the control circuit including
4 means for activating said pump in response to activation
5 of said switch.

1 15. The system of claim 11, wherein said switch is a
2 contact switch, the switch being positioned to come into
3 contact with the sheath when the sheath is positioned
4 over said thermal conductive medium applicator tip.

1 16. A method of applying a thermal conductive medium to
2 an interior portion of a sheath, the method comprising:
3 positioning a sheath over a thermal conductive
4 medium applicator tip;
5 starting the pumping of the thermal conductive
6 medium;
7 rotating the applicator tip; and
8 stopping the pumping of the thermal conductive
9 medium after a first set period of time.

1 17. The method of claim 16, further comprising:
2 stopping the rotation of the applicator tip
3 after a second set period of time passes, the second
4 period of time starting from the point in time at which
5 the pumping is stopped.

1 18. The method of claim 17, wherein the applicator tip
2 is attached to a source of thermal conductive medium by
3 an applicator shaft, the method further comprising:
4 purging the applicator shaft of thermal
5 conductive medium after the rotation of the applicator
6 tip is stopped.

1 19. The method of claim 18, further comprising:
2 following stopping the rotation but prior to
3 purging, removing the sheath so that it is no longer
4 positioned over the applicator tip.

1 20. The method of claim 16, further comprising:
2 sensing when said sheath is positioned over a
3 thermal conductive medium applicator tip; and
4 wherein said step of starting the pumping is
5 performed in response to sensing that said sheath is
6 positioned over the thermal conductive medium applicator
7 tip.

1 21. The method of claim 17, wherein stopping the pumping
2 of the thermal conductive medium after a first set period
3 of time includes:

4 operating the control circuit to stop the
5 supply of power to a pump; and
6 wherein stopping the rotation of the applicator
7 tip includes:

8 operating the control circuit to stop the
9 supply of power to a motor used to rotate the
10 applicator tip.

1 22. The method of claim 19, wherein the first set period
2 of time is long enough to pump sufficient thermal
3 conductive medium to produce a coating on said interior
4 portion of the sheath having a thickness, T, in the range
5 of .002" $\leq T \leq$.004".